

Ibn Khaldun and Music as a Science of Mathematical Sciences*

İbn Haldun ve Matematik İlimlerden Bir İlim Olarak Mûsikî

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Abstract: In his book Mukaddima, Ibn Haldun (1332–1406) considers music as a science amongst the other rational (philosophical) sciences. According to Ibn Haldun, there are seven rational (philosophical) sciences and logic (Mantık) is first amongst them. Then follow the sciences of arithmetic, geometry, cosmography of mathematical sciences and music, natural sciences and theology. Ibn Haldun recognizes the science of music as one which determines the correlation of sounds to tunes in terms of numbers and investigates measurement methods. Its benefit is to teach the necessary range of singing tunes. Ibn Haldun is a significant Muslim scholar who studied music from all aspects. In Ibn Haldun's 14th and 15th century work on music theory, one can access to important philosophical and practical information about music. The fact that he includes music under the categories of wisdom and philosophy is indicative of the position of music among early Muslim thinkers.

Keywords: Ibn Khaldun, Muqaddimah, Music, Philosophical Sciences

Öz: *İbn Haldun (1332–1406) Mukaddime adlı eserinde mûsikîyi aklî (felsefî) ilimlerden bir ilim olarak zikretmektedir. İbn Haldun'a göre aklî (felsefî) ilimler 7 tanedir. Bu ilimlerin başında "Mantık" ilmi gelmektedir. Daha sonra ise sırasıyla ta'limî (riyâzî) ilimlerden aritmetik, geometri, kozmografya, bundan sonra da mûsikî, tabiiyyat ve ilâhiyyat ilimleri gelmektedir. İbn Haldun mûsikî ilmini, seslerin ve nağmelerin birbirlerine olan oranları ve bu oranları sayı itibarıyla tâyin eden ve ölçme usullerini inceleyen bir ilim olarak kabul etmektedir. Faydası ise, şarkı söylerken riâyet edilmesi gereken teganni nağmelerini öğretmektir. İbn Haldun, Mukaddime adlı eserinde mûsikîyi bütün zâviyelerden ele alarak incelemiş önemli bir İslâm düşüncesidir. Onun eserinde mûsikîye dâir hem icrâ ve hem de nazarî açıdan önemli bilgiler bulabilmekteyiz. Özellikle ilerleyen bölümlerde mûsikîyi hikmet ve felsefe ilimleri kategorisine dâhil etmesi, onun kadîm İslâm düşünürlerinin mûsikî hakkındaki düşüncelerine yaklaştığını göstermektedir. Bu da bizlere İslâm düşünce ve medeniyetinin mûsikî düşünce ve yorumlarının genel olarak hikmet ve felsefe temelli olduğunu öğretmektedir. Bu*

* This article is a review of the paper presented at the "3rd International Ibn Khaldun Symposium" organized on 28-29 September 2013 in Istanbul.

yaklaşımlarıyla İbn Haldun ondördüncü yüzyılın sonları ve onbeşinci yüzyılın başlarındaki mûsikî düşüncesini yansıtmaktadır.

Anahtar Kelimeler: *İbn Haldun, Mukaddime, Mûsikî, Akli İlimler*

In terms of their interests towards music, it is possible to divide the Muslim thinkers into two categories. The first category of thinkers are those interested in music, who and developed an approach for music. For this category, Ya'kub al-Kindi and Farabi are key examples. The second category of Muslim thinkers consist of those who do not perform music but express their views regarding music and develop new approaches. For this category, Ibn Sina and Ibn Haldun are examples in this line of thinkers.

Until now it hasn't possible to find any information about Ibn Haldun either composing a musical work, playing an instrument or performing with vocals. Although he wasn't occupied with music, he expressed his thoughts in regards to it. This demonstrates the special place of music in the realm of Islamic thought, and the interest of the Islamic thinkers for music on the basis of theory rather than performance. These theorists include Farabi who lists music as a high-ranking knowledge in the order of sciences. Farabi's work called "İhsa al-Ulum (the counting of sciences)" imagines music as one of the seven sciences of highest rank. Mathematic, Geometry, Astronomy and Music are accepted as four of them (i.e. "Quadrivium"). And the three sciences (i.e. "Trivium") that are categorized as lower sciences are Logic, Rhetoric and Grammar. In Islamic civilization, one of the prerequisites of being an efficient thinker was the mastery over these seven disciplines. In this respect, Ibn Haldun puts forth a concise idea regarding music. As it was indicated in "Mukaddima", Ibn Haldun's approach and thoughts are of a mathematical-rational nature and he considers music as a mathematical science.

The tendency of his contemporaries explaining music with a mathematical language may have lead Ibn Haldun to declare a view of music in accordance with his time. Lived in the period between Safiuddin Umevi (D. 1294) and Abdulkadir Meraghi (D. 1435) who were important scholars of music as well as performers, Ibn Haldun's mathematical views and approaches can be seen in Ladikli Mehmet Çelebi (D. 1498) who in later periods lived in the Ottoman State and was considered to be an important musicologist of Ottomans.

Ibn Haldun (1332-1406) also mentions music as one of the rational (philosophical) fields of science. Ibn Haldun recognizes the science of music as one that emphasizes the relationship of sounds to tunes using numbers and he also investigated measurement methods. Its benefit is to teach the necessary singing tunes that should be complied

with when singing. (İbn Haldun, Mukaddime, C:II, s. 566–567, Çev: Zâkir Kâdirî Ugan, Millî Eğitim Bakanlığı Yayınları, İst. 1986).

Ibn Haldun does not handle music from one aspect only. As a social scientist and historian, he takes into consideration all the approaches within the Islamic civilization and makes interpretations that provide information regarding music. He handles and explains the matter by looking at it from a wide angle. For example he examines how music is an art of harmony and examines proportions of sounds. He also looks at how it was utilized in Persian and Arab societies and how it is a science of mathematic and philosophy and how it is an implication of a civilization and social life.

In the fifth chapter of the first book of Mukaddima, in the 32th section titled as “Music and Singing”, he explains music as an art of proportion of sounds and in the same section he touches upon some of the musical instruments and the place of music in Arab and Persian culture. It can be said that Ibn Haldun provides information by dividing music into several categories. For instance, aside from the usage of music in the Arab and Persian society, he later gives some information regarding music in the Abbasids. Although these anecdotes are short, they offer enlightening knowledge on the practice of music in these societies and in the Abbasid court. In addition to that, he introduces some of the significant musicians of his time such as Ziryab of Mosul who later migrated to Andalusia, and in this section he points at the tuneful recitation of Qur’an and some of the jurisdictional approaches transmitted from Imam Malik and Imam Shafi’i. This all shows how Ibn Haldun, in his Mukaddima, looks at music from quite a wide angle. But generally speaking, in this section, Ibn Haldun’s approach to music is placed on the concept of the proportion of sounds. On the other hand, in the 13th section titled “rational sciences and their parts”, he includes music into the category of the mathematical and rational sciences in accordance with the general approaches of early Islamic thinkers such as Farabi and el-Kindi regarding music. It must be remembered that in his work “İhsa el-Ulum” (the counting of sciences), Farabi accepts music as a high rank knowledge and in his classification, positions it in mathematical sciences.¹ In the early musical ponderings, we encounter Ibn Haldun’s concept of proportions in music firstly in Hermes and Pythagoras who has been schooled with a hermetic doctrine.²

Music is a significant manifestation of a civilization. The advancement and the level of music bares a civilizational importance as it points out to the level of development of a

¹ Fârâbî, İhsâ el Ulûm.

² Yalçın Çetinkaya, İhvan-ı Safâ’da Mûsikî Düşüncesi, İnsan Yayınları, İst.1995.

civilization. Ibn Haldun states that the relation of music and the advancement of the civil life with these words:

“Know that music and the act of singing is an art and it only spreads amongst the people of cities and regions of advanced civilized living. After the basic necessary needs and substances are addressed and the phase of fulfilling the needs of a civilized life rises, an interest and a tendency towards this art awakens. Only after this, people who wish to enjoy themselves with the customs and opportunities of the wealth and the civilized life wants to hear sounds of music and singing, in other words, those who have this level of economic advancement feels in need of this art.”

Here, with an approach of a social scientist, Ibn Haldun makes a connections between music, and the individual and society; as well as the welfare level of a society.³

Ibn Haldun states that the art of music and singing is not a vital need of the individual or the society, and being a custom and an offer of the civilized lifestyle it is an art that flourishes in the later phases of a civilized life. He claims that music is an art specific to having fun and enjoyment as the customs and advantages of abundance, it is doomed to disappear if civilized life regresses and if economic activities begin falling behind or getting corrupted.⁴

Ibn Haldun opens the 32nd chapter of Mukaddima which he dedicates to the art of music with the title of “Singing and the Art of Music”. He describes the art of music from the aspect of application by saying: “It is the act of singing poems and songs of certain meters according to certain known musical principles in an organized way”. In this description, he puts emphasis on the “musical principles”⁵. For Ibn Haldun, “principle” is an important note. It provide a harmony of sounds and tunes that gives pleasure and joy to humans who have a tendency towards and an admiration for harmonious sounds. Ibn Haldun explains that a euphony (tenasüp), or as it is said today, harmony in the art of music emerges because of these musical principles. In terms of musical technique, this idea might be considered remarkable and advanced for his time. Within the history of Western music, if we take into consideration the emergence of principles of harmony in the far later centuries, it would be possible to say Ibn Haldun made a remarkable and advanced conclusion in regards to music theory.. The main concept Ibn Haldun focuses

³ A.g.e.

⁴ İbn Haldun, Mukaddime, Çev: Zâkir Kâdirî UGAN, M.E.B Yayınları, İstanbul 1986, C:II, S.432.

⁵ İbn Haldun, A.g.e., s: 437.

on in the section of music is ‘tenasüp’, i.e. proportion, harmony, accordance. Ibn Haldun explains the concept of musical harmony by relating the sounds with a mathematical and geometrical accordance. This principle is mirrored in how Aristo defines “beauty” as a “sum of harmonies.”

We see that Ibn Haldun provides information about some of the musical instruments in the section that is given to music in Mukaddima. Aside from Ney and Tanbur, he mentions a woodwind instrument called “Şabbabe” made by drilling holes in a reed, which we understand to be in use in the region he dwelled. He gives information about another regional instrument called “Zulami “ which is made by carving holes in wood. Aside from these, one can learn the existence of ancient stringed instruments found in West Africa. In fact, Ibn Haldun provides detailed information on the design and construction of these old instruments. He says that they are similar to the instruments of Tanbur and Kopuz, and some of them have a rectangular shape as Kanun and Santur, he also explains how these instruments are played. We may as well infer that Ibn Haldun was a thinker with a considerable amount of knowledge regarding these instruments.⁶

Another striking detail is how Ibn Haldun’s explanations of performing music positions him closer to the musical ideology of Sufis. It is the time when he points out how the (devoted) lovers who are enamoured by a harmonious, soul-pleasing musical performance are affected by it. On the meaning of realization of beauty and exquisiteness when encountering the harmony, Ibn Haldun says the following; “ Beauty, harmony and the substance that gathers the qualities of delightfulness is for the self who is capable of realization, by realizing the temperateness, self or nafs becomes delighted and pleased. For this reason enamored lovers express that only when their souls meet and merge with the soul of the beloved their love reaches the highest level. You may see the wisdom and mystery of this if you are of the people of love. This wisdom and mystery is shared between the existence of those whose nature of being was a possibility in the very beginning.”⁷

It is possible to come across to similar views in Mevlana Jaleddin Rumi as well as other people of Sufism. Sufis define and explain this kind of love as the “divine love”. But the statements of Ruzbaha Baqli of Shiraz are especially important for this respect. He is the one who says that music is only permissible to those of divine love and it is thus impermissible to the corrupt and ignorant ones. In his work named “Risaletu’l Kuds”,

⁶ Ibn Haldun, A.g.e., C: II, s. 425.

⁷ Ibn Haldun, A.g.e. ,C: II, s: 426-427.

Ruzbahan Baqli touches upon the necessary characteristics of those who are authorized to listen to music as he explains the importance of music. According to Baqli, music is a stimulator of Divine mysteries (Rabbani). For some, music can be encouraging to committing sins for they lacking and ignorant. And for others, music is a sermon for he proceeds on the road to perfection. Spiritual music is the Divine music. The seekers of love (muhabbet) listen to the music, as they are purified from their self (nafs), and away from their wordly being.⁸

In the 13th section titled as "Rational Sciences and Their Parts" of the sixth chapter of the first book in Mukaddima, Ibn Haldun comes back to the matter of music and in this section he brings an explanation parallel with the commentaries of early Muslim thinkers. For Ibn Haldun, music's benefit is solely to teach the necessary singing tunes that should be complied with when singing.⁹

Ibn Haldun is a significant Muslim scholar who in his book Mukaddime studies music from all its aspects. In his work, we can access important philosophical and practical information regarding music. Especially the fact that he includes music under the categories of wisdom and philosophy in his fallowing chapters indicates his connection with earlier Muslim thinkers on music. This demonstrates how the thoughts and interpretations of music in Islamic thought and civilization were generally based on wisdom and philosophy. By his approach, Ibn Haldun reflects the ideology of music present at the end of the fourteenth and the beginning of the fifteenth century.

⁸ İbn Haldun, A.g.e., C: II, s: 427-428

⁹ Seyyid Hossein NASR, Islamic Art and Spirituality, Golgonooza Press, 1987, s: 154.